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Peter Besen

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EXAMINER

ROBERTS, JESSICA M

ART UNIT

PAPER NUMBER

2621

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05/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/726,814	Applicant(s) BESEN ET AL.	
	Examiner JESSICA ROBERTS	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

Claims **16-22** in the previous office action have been cancelled. Claims **1-15** are currently pending.

Response to Arguments

Applicants arguments filed on 02/21/2008 have been fully considered but they are not persuasive.

As per applicants argument regarding one skilled in the art would not need to combine the teachings of Hughes, AAPA, and Garrido to the achieve the goal of allowing

The examiner respectfully disagrees. Hughes teaches a standard definition image is generated by decoding the base layer data. A high definition image is generated by decoding and combining both the base layer data and the enhancement layer data [0008]. It should be noted that the enhancement layer contains the high-resolution portions of the source image [0022]. Hughes doe not explicitly disclose, scaling the base layer data. Garrido teaches interpolation, though scaling and sharpening a standard definition (SDTV) signal, to a high definition (HDTV) signal is a method to simulate high definition content, necessary to display SDTV on a high definition monitor. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the teachings of Garrido to explicitly teach scaling of SDTV signals to fit on HDTV displays [0050].

As per applicant argument regarding Hughes teaches away from the combination with Garrido.

The examiner respectfully disagrees. The invention as disclosed by Hughes is related to layered coding technique in which different track on a storage medium store different layers of data that can render either a standard definition or high resolution image while storing the data efficiently [0001]. Further, Hughes discloses the base layer and the enhancement layer are decoded simultaneously [0013]. Since Hughes discloses to generate a high definition signal by combining both the base and enhancement layer data, it is clear to the examiner that Hughes would obviously include scaling the standard definition signal. Garrido, discloses that in order for to be displayed on a traditional HDTV display, SDTV, SDTV signals from sources such as broadcast, VHS, laserdisc, and DVD need to be up-converted to HDTV [0050]. Further, disclosed by Garrido is that the prediction engine may employ previously enhanced frames to form a better estimate, but nominally scales each picture from SD to HD [0135]. Therefor, it is clear to the examiner that Hughes does not teach away from Garrido.

As per applicants argument regarding modifying Hughes as proposed by Examiner would render Hughes inoperable for its intended purpose.

The examiner respectfully disagrees. Hughes defines the base layer represents a standard definition portion of the source image and the enhancement layer represents a high-resolution portion of the source image (abstract). A high resolution decoding system decodes the base layer and enhancement layer simultaneously to generate a

high-resolution image (abstract). Hughes discloses where a high definition image is generated by decoding and combining both the base layer data and the enhancement layer data [0008]. It is clear to the examiner that it would be obvious to scale the base layer in Hughes to generate the high definition signal. However, Hughes does not explicitly disclose scaling. Garrido teaches scaling the standard definition signal to a high definition signal as evidence in [0037] and [00135].

Therefore, it is clear to the examiner that Hughes would be fully operable being modified by Garrido.

As per applicant argument regarding Hughes still does not teach "An apparatuscomprising:, " a high definition program stream demuxer", and "a video muxer".

The examiner respectfully disagrees. Hughes teaches fig. 7 is a block diagram showing pertinent components of a computer 430 that can be used with the present invention. A computer such as that shown in fig. 7 can be used, for example, to perform various procedures to encode or decode images, to store image data for later retrieval, read data from a DVD, or display images on a display device coupled to the computer [0047] and fig. 7.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-4 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al., US-2001/20038746 and in view of Applicants Admitted Prior Art (herein referred to as AAPA) and further in view of Garrido et al., US-2004/0022318.

Regarding **claim 1**, Hughes teaches a method for producing a high definition video signal comprising: demuxing a high definition program stream into at least one high definition video data stream component and a plurality of companion component data streams (fig. 1); muxing the plurality of companion component data streams with a standard resolution video stream into a standard definition video program stream; demuxing the standard definition program stream into a standard definition video data stream, and a subpicture data stream; scaling the standard definition video stream to a resolution consistent with the high definition video data stream ([0037]); overlaying the scaled standard definition video stream with the demuxed subpicture data stream ([0037]); and replacing the standard definition video stream with the at least one high definition video data stream to produce a high definition video data signal (Hughes teaches a combining module which decodes and combines the base layer with the

enhancement layer data to generate a high resolution signal [0044] which reads on the claimed limitation).

Hughes is silent in regards to muxing the plurality of companion component data streams with a standard resolution video stream into a standard definition video program stream; demuxing the standard definition program stream into a standard definition video data stream, and a subpicture data stream; scaling the standard definition video stream to a resolution consistent with the high definition video data stream ([0037]); overlaying the scaled standard definition video stream with the demuxed subpicture data stream ([0037].

However, AAPA teaches muxing the plurality of companion component data streams with a standard resolution video stream into a standard definition video program stream (fig. Fig. 2); demuxing the standard definition program stream into a standard definition video data stream, and a subpicture data stream (fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes with AAPA to adequately combine the various program streams that compose a standard definition stream into a signal.

The combination of Hughes and AAPA are silent in regards to scaling the standard definition video stream to a resolution consistent with the high definition video data stream; overlaying the scaled standard definition video stream with the demuxed subpicture data stream.

However, Garrido teaches scaling the standard definition video stream to a resolution consistent with the high definition video data stream ([0037]); overlaying the scaled standard definition video stream with the demuxed subpicture data stream ([0037].

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with the teachings of Garrido to convert SDTV signals to fit on HDTV displays ([0050]).

Regarding **claim 2**, the combination of Hughes, AAPA and Garrido as a whole teach everything as claimed above, see claim 1. In addition, Hughes teaches the method of claim 1 further including, prior demuxing the high definition program stream, receiving a program data stream ([0027]).

Regarding **claim 3**, the combination of Hughes, AAPA, and Garrido as a whole further teaches everything as claimed above, see **claim 1**. In addition, Hughes teaches the method of claim 2 further including determining if the received program data stream is a high definition program data stream (Hughes teaches he decoding and combining module may generate an encoded high definition MPEG-2 stream. Further, Hughes discloses the output of base layer may be coupled to a standard definition display device for displaying the video content at a standard resolution ([0045]), which reads on the claimed limitation. Further, it is clear to the examiner that the method as disclosed by Hughes would necessitate determining the type of program stream received in-order to properly display the content.

Regarding **claim 4**, the combination of Hughes and AAPA are silent in regards to method of claim 1 wherein the plurality of companion component data streams comprises one or more of audio data stream, a subpicture data stream, and a navigational data stream.

However, Garrido teaches the plurality of companion component data streams comprises one or more of audio data stream, a subpicture data stream, and a navigational data stream ([0013]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with GS teachings of the plurality of companion component data streams comprises one or more of audio data stream, a subpicture data stream, and a navigational data stream to allow for SDTV signals to fit on HDTV displays ([0050]).

Regarding **claim 7**, the combination of Hughes and AAPA teaches everything as claimed above, see claim 1. In addition, Hughes teaches the method of claim 1 wherein the at least one high definition video data stream component is in compressed format ([0005], [0032], [0036], and fig. 1).

Regarding **claim 8**, the combination of Hughes and AAPA teaches everything as claimed above, see claim 1. In addition, Hughes teaches the method of claim 7 further comprising, prior to the replacing step, decompressing the high definition video data stream (Hughes teaches where the procedure decompresses (decodes) the base layer data and the enhancement layer data. The decoded base layer data and the decoded

enhancement layer data are combined to create a high-resolution signal, [0046] and fig. 6), which reads on the claimed limitations.

Regarding **claim 9**, the combination of Hughes and AAPA teaches everything as claimed above, see claim 1. In addition, Hughes teaches the method of claim 1 further comprising generating the standard resolution video stream ([0045]).

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al., US-2001/20038746 and in view of Applicants Admitted Prior Art (herein referred to as AAPA) and further in view of Garrido et al., US-2004/0022318 and further in view of Mercier et al., US-2005/0114909.

Regarding **claim 5**, the combination of Hughes and AAPA are silent in regards to the method of claim 1 wherein the high definition program stream is in encrypted format.

However, Mercier teaches the high definition program stream is in encrypted format ([0005]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with Merciers' teachings of the program stream is in an encrypted format to provide a system and method for protecting valuable content ([0008]).

Regarding **claim 6**, the combination of Hughes and AAPA are silent in regards to the method of claim 5 further comprising, prior to demuxing the high definition program stream, decrypting the encrypted high definition program stream.

However, Mercier teaches the processed content is input into the HDTV, where it may be decrypted and demultiplexed by a decrypter/demultiplexer device 1530 ([0082] and fig. 15, 1530), which read on the claimed limitations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with Merciers' teachings of the decrypter/demultiplexer for providing a method and system for protecting valuable content ([0005]).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al., US-2001/20038746 and in view of Applicants Admitted Prior Art (herein referred to as AAPA) and further in view of Garrido et al., US-2004/0022318 and further in view of Chen et al., A SINGLE-CHIP MPEG-2 MP@ML AUDIO/VIDEO ENCODER/DECODER WITH A PROGRAMMABLE VIDEO INTERFACE UNIT

Regarding **claim 10**, the combination of Hughes and AAPA teaches everything as claimed above, see claim 1. In addition, Hughes teaches generating a standard resolution video stream ([0045]). However, the combination of Hughes and AAPA are silent in regards to the method of claim 9 wherein the generated standard resolution video stream comprises a blue screen video elementary stream.

However, Chen teaches blue screen generation (see section 4.1n Encoding).

Therefore, it would have obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with Chens' teachings of blue screen generation for providing a system that accommodates a variety of video

pre- and post-processing algorithms, thumbnail processing/editing, and loopback, in a very efficient way.

Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al., US-2001/20038746 and in view of Applicants Admitted Prior Art (herein referred to as AAPA) and further in view of Garrido et al., US-2004/0022318.

Regarding **claim 11**, Hughes teaches an apparatus for use in producing high a definition video data signal, comprising: a high definition program stream demuxer for extracting a plurality of component data streams from a high definition program stream (fig. 1), the plurality of component data streams comprising at least one high definition video data stream and a set of other component data streams (enhancement layer, fig. 1. Further it is clear to the examiner, that the high definition stream would necessitate the component data streams, as the stream is recorded on a DVD as disclosed by Hughes); a generator for generating a standard definition video stream (base layer generator, fig. 1, 104); a muxer for combining the generated standard definition video stream with the set of other component data streams into a standard definition program stream (fig. 2); a video scalar for increasing the resolution of the standard definition video stream to a resolution consistent with the high definition video stream; a video mixer for replacing the scaled up standard definition video stream with the high definition video data stream (Hughes teaches a combining module which decodes and combines the base layer with the enhancement layer data to generate a high resolution signal [0044] which reads on the claimed limitation). Hughes is silent in regards to a muxer for combining the generated standard definition video stream with the set of other

component data streams into a standard definition program stream and an encrypter for creating a high definition video data signal from the high definition video data stream and the set of other component data streams (fig. 2).

However, AAPA teaches a muxer for combining the generated standard definition video stream with the set of other component data streams into a standard definition program stream (fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes with AAPA to adequately combine the various program streams that compose a standard definition stream into a signal.

The combination of Hughes and AAPA as a whole are silent in regards to a video scaler for increasing the resolution of the standard definition video stream to a resolution consistent with the high definition video stream; and an encrypter for creating a high definition video data signal from the high definition video data stream and the set of other component data streams.

However, Garrido, teaches a video scaler for increasing the resolution of the standard definition video stream to a resolution consistent with the high definition video stream (Garrido teaches scaling the video which would necessitate the use of a scaling 00337]; an encrypter for creating a high definition video data signal from the high definition video data stream and the set of other component data streams (Garrido

further teaches encrypting video [0063]. Further it is clear to the examiner since Garrido discloses encrypting the video, it would be necessitate the use of an encrypter.

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with the teachings of Garrido to convert SDTV signals to fit on HDTV displays ([0050]).

Regarding **claim 12**, the combination of Hughes, AAPA and Garrido teaches everything as claimed above, see claim 11. In addition, Hughes teaches the apparatus of claim 11 further including a receiver for receiving a program data stream (storage medium, DVD, fig. 1).

Regarding **claim 15**, the combination of Hughes, AAPA, and Garrido teaches everything as claimed above, see claim 11. In addition, Hughes further teaches the apparatus of claim 12 further including a router for determining if the received program data stream is a high definition program stream ([0045]).

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al., US-2001/20038746 and in view of Applicants Admitted Prior Art (herein referred to as AAPA) and further in view of Garrido et al., US-2004/0022318 and further in view of Mercier et al., US-2005/0114909.

Regarding **claim 13**, the combination of Hughes, AAPA, and Garrido are silent in regards to the apparatus of claim 12 wherein the received program data stream is in encrypted format.

However, Mercier teaches the program data stream in encrypted format ([0005]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes and AAPA with Merciers' teachings of the program steam is in an encrypted format to provide a system and method for protecting valuable content ([0008]).

Regarding **claim 14**, the combination of Hughes, AAPA, and Garrido are silent in regards to the apparatus of claim 13 further including a decrypter for decrypting the encrypted program data stream.

However, Mercier teaches a decrypter (fig. 15, 1538).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hughes, AAPA, and Garrido with the Merciers teachings of a decrypter for to provide a system and method for accessing encrypted valuable content.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA ROBERTS whose telephone number is (571)270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

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/Jessica Roberts/
Examiner, Art Unit 2621